



IFW

PTO/SB/21 (08-03)

Approved for use through 08/30/2003. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/616,891
	Filing Date	July 9, 2003
	First Named Inventor	Aylward
	Art Unit	3753
	Examiner Name	Hepperle
Total Number of Pages in This Submission	Attorney Docket Number	SWS-002 US

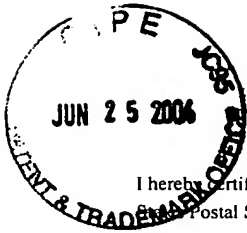
ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Change of Correspondence Address	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Terminal Disclaimer	- Reference cited in ISR
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> Request for Refund	- Copy of International Search Report
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> CD, Number of CD(s) _____	- Postcard listing contents of filing
<input type="checkbox"/> Response to Missing Parts/Incomplete Application	Remarks	
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Clifford B. Perry
Signature	
Date	June 21, 2004

CERTIFICATE OF TRANSMISSION/MAILING	
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.	
Typed or printed name	Clifford B. Perry
Signature	
Date	June 21, 2004

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope with sufficient postage addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria VA, 22313-1450

PATENT
Docket No.: SWS-002 US

On 21 JUNE 2004
By: Clifford B. Perry
Clifford B. Perry, Reg. No. 43,854

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/616,891
Applicants : Aylward et al.
Filed : July 9, 2003
Art Unit : 3753
Examiner : S.M. Hepperle

Docket No. : SWS-002 US
Customer No. : 30499
Confirm No. : 1686

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**Remarks in view of cited
IDS References**

Dear Examiner:

Applicants herewith attach an Information Disclosure Statement citing UK Patent Application GB 2314580 (herein referred to as the Davenport reference) as cited by the European Patent Office in a counterpart PCT application. Applicants now provide the following remarks in support of the pending claims' patentability in view of the Davenport reference.

The Present Invention

The present invention provides systems and methods for collecting and distributing graywater in which a collection valve (160 in Fig. 1 in an exemplary embodiment) is located on a main drain line *down stream from one or more blackwater sources*, for example on the main drain line. The collection valve 160 includes an inlet, and an outlet connectable to a blackwater drain line (e.g. sewer main or septic tank line), or a graywater drain line, depending upon which water flow is sensed. Blackwater flow is detected by means of a black water sensor (141-143 in Fig. 1 in an exemplary embodiment) located on each of the blackwater sources. Locating the collection valve

down stream from one or more blackwater sources enables graywater collection from the main drain line, as opposed to collecting graywater from each graywater source, or requiring a separately-plumbed graywater system.

Independent claims 1 and 20 include the aforementioned limitation of locating the collection valve down stream of one or more black water sources:

Claim 1: “a collection valve located down stream from at least one of the one or more black water sources,”

Claim 20: “connecting on the main drain line and down stream from at least one of the one or more black water sources, a collection valve having....”

Independent claim 7 recites the above-described limitation in which sensors are located on black water sources to detect black water flow: “one or more black water sensors configured to detect water flow from the one or more black water source[s]”

The Davenport Reference

Referring now to the Davenport reference, Fig. 1 illustrates a diverter valve 13 located down stream from two graywater sources (bath 10 and sink 11), the diverter valve 13 configured to divert graywater flow to either a stored vessel 18 or soil stack 16. In particular, the Davenport reference does not show or suggest locating the diverter valve 13 downstream from one or more blackwater sources (e.g., a toilet, water softener unit, sink having a garbage disposal unit), as recited in independent claims 1 and 20 of the present invention. The Davenport reference illustrates a conventional separately plumbed graywater system in which two graywater sources 10 and 11 are plumbed together by means of pipe 12, apart from any blackwater sources. As can be understood from the discussion on page 3, 4th paragraph, the blackwater sources (such as a WC) are located down stream from the diverter valve 13:

“As shown in Fig. 1, waster water [from] bath 10 and one or more wash basins 11 is fed to a common waste pipe which is connected to a changeover valve 13. This valve can direct flow from the waste pipe 12 alternatively either via a pipe 14 with a trap 15, to a domestic soil stack 16, which in turns lead *from a household WC etc. to a sewer* (not shown);” (italics added)

Conventional graywater collection systems that require separately plumbed graywater sources suffer disadvantages as many existing plumbed structures are not separately plumbed, but instead have gray and blackwater sources interconnected only by means of the main drain line. In such a system, the conventional approach would require collecting graywater from each graywater source separately, or re-replumbing the structure to tie all graywater sources together to a single point up stream from any blackwater source.

Applicants note that Davenport discusses an instance in which unacceptable waste is drained into one of the graywater sources (pg. 2, last paragraph). However, this use does not convert the Davenport sink 11 into a blackwater source. As known in the art, a water source is defined as a gray or blackwater source based upon the grade of water it regularly produces; sinks and bathtub regularly producing graywater, and toilets regularly producing blackwater. While each source could be used to produce another grade of water (i.e., an empty toilet flushed to produce graywater), the source would still be considered black or gray, depending upon the grade of water it normally produces. Accordingly, the Davenport bath 10 and sink 11 would be considered graywater sources, and not blackwater sources as defined in the art.

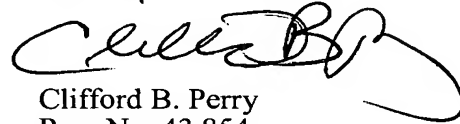
In view of the foregoing, Applicants assert that the Davenport reference does not show or suggest a collection valve located downstream from one or more blackwater sources, as recited in claims 1 and 20. Further, the Davenport reference does not show or suggest locating sensors on blackwater sources to detect the flow of black water. Further, none of the other cited references make up for either of these deficiencies. Accordingly,

claims 1, 7, and 20 are now allowable over the cited references. Additionally, as all of the remaining claims are dependent from at least one of these claims, they are allowable for at least the same reasons.

Conclusion

The Applicants submit that all pending claims are in condition for allowance and a notice to such effect is respectfully requested. If the Examiner believes that a telephone interview would expedite the prosecution of this case or if any questions arise, a call to the Applicants' representative, Clifford Perry, is invited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Clifford B. Perry', with a large, sweeping flourish extending to the right.

Clifford B. Perry
Reg. No. 43,854
Attorney for Applicants

449 Santa Fe Drive, #312
Encinitas, CA 92024
Tel: (760) 634-5652

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Application Number	10/616,891
Filing Date	July 9, 2003
First Named Inventor	Aylward
Art Unit	3753
Examiner Name	Hepperle
Attorney Docket Number	SWS-002 US

Sheet	1	of	1
-------	---	----	---

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.